

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

A085927923

FACILITY: MACO TOOL & ENGINEERING		SRN / ID: A0859
LOCATION: 210 SPRING STREET, SAINT JOHNS		DISTRICT: Lansing
CITY: SAINT JOHNS		COUNTY: CLINTON
CONTACT: Steve Hiner, Plant Manager, President		ACTIVITY DATE: 11/17/2014
STAFF: Michelle Luplow	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Self-initiated unannounced compliance inspection. Source may have never been inspected by AQD in the past.		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow

Personnel Present: Steve Hiner, Plant Manager & President (stevhiner@macotool.com)

Doug Hogan, Purchasing Manager (doughogan@macotool.com)

Purpose:

Conduct an unannounced, self-initiated compliance inspection by determining compliance with Maco Tool and Engineering's (Maco) Permits to Install (PTI) Nos. 475-80 for a King chrome plating machine and 476-80 for 3 Parker-Majestic surface grinders controlled by a cyclone dust collector.

Facility Background/Regulatory Overview:

It is unknown whether this facility has been inspected in the past. There are no records for this site in the Air Quality Division (AQD) files or in MACES. Doug Hogan said that the facility has been in business since 1971 and is involved in fabricating machining parts for companies such as F.C. Mason and Enprotech. This includes the parts that are used in presses to make bearings and bushings for motors.

Inspection:

At approximately 8:30 a.m. on November 17, 2014, I met with Steve Hiner, Maco's Plant Manager and President and Doug Hogan (who provided me with a tour of the facility). I explained to S. Hiner why I was there and provided him with a DEQ "Environmental Inspections: Rights and Responsibilities" brochure to illustrate a typical inspection procedure, as well as a May 2012 Permit to Install Exemption handbook.

PTI No. 475-80 – King plating machine

S. Hiner said that they no longer have this equipment. While walking through the facility with D. Hogan, I verified that there were no chrome plating tanks on the premises. A void request was submitted to Sue Thelen on November 18, 2014 for this PTI. D. Hogan said that any parts that need chrome plating from Maco are sent to Diamond Chrome in Howell.

PTI No. 476-80 – 3 surface grinders with cyclone dust collector

Maco currently has 6 surface grinders that are exhausted to a particulate control device. They were not being operated during the inspection and therefore I could not verify that VE readings did not exceed 20% opacity nor could I verify that the cyclone dust collector was operating properly. S. Hiner said that the dust collector is a Dustkop. Dustkop is a brand of cyclone dust collector that can be attached to various types of fabric or bag dust collectors. S. Hiner said that the Dustkop has a bag connected to it to filter out particles. The additional 3 surface grinders are not covered by PTI No. 476-80. Permit to Install exemption Rule 285(l)(vi)(C) says that surface grinding is exempt if externally vented emissions are controlled by an appropriately designed and operated fabric filter that is preceded by a mechanical precleaner. Based on the particulate control device description provided by S. Hiner, the additional 3 surface grinders are exempt per Rule 285(l)(vi)(C). I will revisit the site and take photos and inspect the particulate control system to verify that it meets the exemption criteria in the future.

Exempt Equipment

Maco has several PTI-exempt processes.

The lathes (13 total), drills, steel saws, turning equipment, and sand blasting equipment are exempt per Rule 285(l)(vi)(B) because they all release emissions only to the general in-plant environment. The sandblaster is self-contained and used for small parts.

The welding equipment is exempt per Rule 285(i).

D. Hogan showed me a small booth with local ventilation that is used for applying black oxide to small metal parts. He provided me with an MSDS for the black oxide and said that Maco uses less than 1 gallon of black oxide on

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average per month. The Birchwood Technologies MSDS (attached) says that black oxide is a blackening solution for all iron and non-stainless steels and is mixed with water to make an immersion blackening bath. According to the MSDS, this product is acidic and corrosive. This does not meet the surface coating exemption 287(c) because it lacks local ventilation. Exemption Rule 290 would therefore be applicable. According to the MSDS, the black oxide solution contains, by weight, 3% selenious acid, 3% phosphoric acid and 94% water. Phosphoric acid is not carcinogenic, there is no data for selenious acid in the Michigan Air Toxics System. Toxics unit Doreen Lehner said she would look into toxicological information for this compound and inform me of whether or not this compound has an ITSL or an IRSL. If it has an IRSL, Rule 290 cannot be used for the black oxide immersion process. Phosphoric acid has an initial threshold screening level (ITSL) of $10 \mu\text{g}/\text{m}^3$ per 24 hour averaging time. Under Rule 290 (a)(ii) (A), noncarcinogenic air contaminants or materials are exempt if the ITSL is greater than or equal to $2.0 \times 10 \mu\text{g}/\text{m}^3$ and the uncontrolled emissions do not exceed 1000 pounds per month. The density of the solution is approximately 8 lb/gal. Using only an average of 1 gallon per month brings Maco's emissions to approximately 8 lb/month, which is below the 1000 lb/month limit. I will inform Maco's Steve Hiner that monthly records of black oxide use must be kept to demonstrate compliance with the Rule 290 exemption.

A paint booth has also been installed. S. Hiner said that the booth was installed approximately 15 years ago. It is exempt per Rule 287(c). Rule 287(c) requires that Maco remain under 200 gallons of coating per month (minus water), that there is a properly installed and operating particulate control system and that monthly coating use records be kept. The paint booth is currently being updated, but D. Hogan explained, and I verified, that there are 4 vents on the ceiling of the booth and that each vent has its own filters designed specifically for paint booths. They also said that only HVLP spray guns are used. D. Hogan provided me with monthly purchase records (see attached) for July – October 2014. The following table is a monthly summary of the purchase record invoices:

Month (2014)	Gallons Purchased
July	7
August	1
September	6.5
October	7

Maco is using less than 10% of their allowed 200 gallon limit under the exemption and are therefore in compliance with Rule 287(c) for the paint booth.

Currently Maco Tool & Engineering is in compliance with all state and federal regulations at this time.

NAME Michael M. Lupton

DATE 12-4-14

SUPERVISOR B.A.